

Appl. No. 09/977,991
Reply to Office Action dated April 23, 2007

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method of selecting at least one base station for communicating with a terminal in a wireless communication system, comprising the steps of:

storing an uplink candidate set listing at least one candidate uplink base station;

storing a downlink candidate set listing at least one candidate downlink base station;

determining a predominant direction of traffic with respect to the terminal;

if the predominant direction of traffic is in an uplink direction, selecting at least one optimum base station from the uplink candidate set; and

if the predominant direction of traffic is in a downlink direction, selecting at least one optimum base station from the downlink candidate set.

2. (Original) The method of claim 1 wherein the step of storing an uplink candidate set comprises the steps of:

receiving a channel quality corresponding to a base station;

determining whether the channel quality corresponds to an uplink channel;

if the channel quality corresponds to an uplink channel, determining whether the base station is a candidate uplink base station;

if the base station is a candidate uplink base station, ensuring that the base station is present in the uplink candidate set; and

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if the base station is not a candidate uplink base station, ensuring that the base station is not present in the uplink candidate set.

3. (Original) The method of claim 2 wherein the step of determining whether the base station is a candidate uplink base station determines that the base station is a candidate uplink base station if the channel quality is above a threshold.

4. (Original) The method of claim 1 wherein the step of storing a downlink candidate set comprises the steps of:

receiving a channel quality corresponding to a base station;

determining whether the channel quality corresponds to a downlink channel;

if the channel quality corresponds to a downlink channel, determining whether the base station is a candidate downlink base station;

if the base station is a candidate downlink base station, ensuring that the base station is present in the downlink candidate set; and

if the base station is not a candidate downlink base station, ensuring that the base station is not present in the downlink candidate set.

5. (Original) The method of claim 4 wherein the step of determining whether the base station is a candidate downlink base station determines that the base station is a candidate downlink base station if the channel quality is above a threshold.

6. (Original) The method of claim 1 comprising the further step of transmitting an identity of the at least one optimum base station to the terminal.

7. (Original) The method of claim 1 wherein the step of selecting at least one optimum base station from the uplink candidate set comprises the steps of:

determining a current load of each base station in the uplink candidate set; and

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selecting from the uplink candidate set at least one optimum base station that has the lowest current load;

and wherein the step of selecting at least one optimum base station from the downlink candidate set comprises the steps of:

determining a current load of each base station in the downlink candidate set; and

selecting from the downlink candidate set at least one optimum base station that has the lowest current load.

8. (Original) A base station controller adapted to carry out the method of claim 1.

9. (Original) An article of manufacture comprising a computer-readable storage medium, the computer-readable storage medium comprising instructions for:

storing an uplink candidate set listing at least one candidate uplink base station;

storing a downlink candidate set listing at least one candidate downlink base station;

determining a predominant direction of traffic with respect to a terminal;

if the predominant direction of traffic is in an uplink direction, selecting at least one optimum base station from the uplink candidate set; and

if the predominant direction of traffic is in a downlink direction, selecting at least one optimum base station from the downlink candidate set.

10. (Original) The article of manufacture of claim 9 wherein the instructions for storing an uplink candidate set comprise instructions for:

receiving a channel quality corresponding to a base station;

determining whether the channel quality corresponds to an uplink channel;

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if the channel quality corresponds to an uplink channel, determining whether the base station is a candidate uplink base station;

if the base station is a candidate uplink base station, ensuring that the base station is present in the uplink candidate set; and

if the base station is not a candidate uplink base station, ensuring that the base station is not present in the uplink candidate set.

11. (Original) The article of manufacture of claim 10 wherein the instructions for determining whether the base station is a candidate uplink base station determine that the base station is a candidate uplink base station if the channel quality is above a threshold.

12. (Original) The article of manufacture of claim 9 wherein the instructions for storing a downlink candidate set comprise instructions for:

receiving a channel quality corresponding to a base station;

determining whether the channel quality corresponds to a downlink channel;

if the channel quality corresponds to a downlink channel, determining whether the base station is a candidate downlink base station;

if the base station is a candidate downlink base station, ensuring that the base station is present in the downlink candidate set; and

if the base station is not a candidate downlink base station, ensuring that the base station is not present in the downlink candidate set.

13. (Original) The article of manufacture of claim 12 wherein the instructions for determining whether the base station is a candidate downlink base station determine that the base station is a candidate downlink base station if the channel quality is above a threshold.

14. (Original) The article of manufacture of claim 9 further comprising instructions for transmitting an identity of the at least one optimum base station to the terminal.

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15. (Original) The article of manufacture of claim 9 wherein the instructions for selecting at least one optimum base station from the uplink candidate set comprise instructions for:

determining a current load of each base station in the uplink candidate set; and

selecting from the uplink candidate set at least one optimum base station that has the lowest current load;

and wherein the instructions for selecting at least one optimum base station from the downlink candidate set comprise instructions for:

determining a current load of each base station in the downlink candidate set; and

selecting from the downlink candidate set at least one optimum base station that has the lowest current load.

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

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27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)